I claim:

1. A down hole device comprising:

-an outer tubular member having a series of slots therein, said slots being arranged about the exterior of said outer tubular member at an angle of inclination of between 25 degrees to 45 degrees;

-an inner member disposed within said outer tubular member;

-means for moving said outer tubular member in a first direction in order to subject the outer tubular member to a downward force so that the outer tubular member is expanded along said slots.

2. The down hole device of claim 1 wherein said slots are arranged about said outer tubular member in a spiral mode.

3. The down hole device of claim 1 wherein said slots are arranged about said outer tubular member in a first spiral pattern which extends to a second spiral pattern.

4. The down hole device of claim 1 wherein said moving means comprises:

-a setting tool having a setting sleeve operatively associated with said outer tubular member and a mandrel being connected to said inner member, and wherein said mandrel causes an upward force against the bottom end of said outer tubular member and wherein said setting sleeve

causes a downward force against the top end of said outer tubular member so that said outer tubular member expands.

5. The down hole device of claim 4 further comprising:

-ratchet means, disposed between said mandrel and said setting sleeve, for allowing movement of said outer tubular member in a first direction but preventing movement in a reverse direction.

6. The down hole device of claim 1 wherein said moving means comprises:

-a setting apparatus comprising: a setting sleeve connected to said outer tubular member; a mandrel being connected to said inner member; a chamber positioned between said outer tubular member and said inner tubular member; and wherein a pressure entering said chamber causes an upward force to be applied to said mandrel and a downward force to be applied to said setting sleeve so that said outer tubular member expands.

7. The down hole device of claim 6 further comprising:

-stroke limit means for limiting the movement of said mandrel in a first direction.

8. A method of expanding an anchoring device within a casing, the anchoring device comprising: an outer tubular member having a series of slots therein, said slots being arranged about the exterior of said outer tubular member in a spiral pattern; an inner cylindrical member disposed within said outer tubular member; the method comprising:

-lowering the anchoring device to the desired level;

-applying a first force to said inner cylindrical member in a first direction in order to subject the inner tubular member to an upward force;

-applying a second force to said outer tubular member in a second direction in order to subject the outer tubular member to a downward force;

-expanding said outer tubular member along said slots;

-engaging said outer tubular member against the inner wall of the casing.

9. The method of claim 8 wherein the anchoring device further comprises a setting apparatus comprising: a setting sleeve connected to said outer tubular member; a mandrel being connected to said inner cylindrical member; a chamber positioned between said outer setting sleeve and said mandrel; and wherein the step of applying the first force and the second force comprises:

-applying a pressure to said chamber;

-moving said setting sleeve downward in response to said hydraulic pressure.

10. The method of claim 9 wherein the anchoring device further comprises a ratchet means, disposed between said setting sleeve and said mandrel, and wherein the step of moving said setting sleeve further comprises:

-allowing movement of said setting sleeve in a first direction relative to said mandrel but preventing movement in a reverse direction.

11. The method of claim 10 wherein said spiral pattern is arranged in a first direction.

12. The method of claim 10 wherein said spiral pattern is arranged in a first spiral direction, and wherein said first spiral pattern extends to a second spiral direction.

13. The method of claim 10 wherein the anchoring device contains a plug device so that a flow stream from the casing is prevented from flowing through the anchoring device.

14. The method of claim 10 wherein the anchoring device contains a one-way valve so that a flow stream from the casing is allowed to flow in a first direction through the anchoring device but is precluded from flowing in a second direction through the anchoring device.

15. The method of claim 10 wherein a cover material encases said outer tubular member and the cover material comprises an elastomeric member disposed about the outer tubular member and the step of engaging said outer tubular member against the inner wall of the casing further comprises sealingly engaging the elastomeric member against the inner wall of the casing.

16. The method of claim 10 wherein the outer tubular member has attached thereto a gravel pack screen and the method further comprises: placing a gravel pack slurry about the gravel pack screen.

17. A down hole device disposed within a well bore, the down hole device comprising:

-an outer tubular having a series of spiral slots therein, said spiral slots being arranged about the outer portion of said outer tubular;

-an inner tubular disposed within said outer tubular;

-means for moving said outer tubular in a first direction in order to engage the shoulder so that a downward force is applied to the outer tubular thereby expanding the outer tubular along said spiral slots;

-a cover material member disposed about said outer tubular.

18. The down hole device of claim 17 wherein said cover material is an elastomeric member.

19. The down hole device of claim 18 wherein said moving means comprises:

-a setting tool having a setting sleeve connected to said outer tubular and a mandrel being connected to said inner tubular, and wherein said mandrel causes an upward force against the bottom end of said outer tubular and wherein said setting sleeve causes a downward force against the top end of said outer tubular so that said outer tubular expands along said spiral slots.

20. The down hole device of claim 19 wherein said spiral slots are arranged about said outer tubular in a first spiral pattern and wherein said first spiral pattern extends to a second spiral pattern.

21. The down hole device of claim 20 further comprising:

-stroke limit means, disposed between said setting sleeve and said mandrel, for terminating the movement of the mandrel in a first direction.

22. The down hole device of claim 18 wherein said moving means comprises:

-a setting apparatus comprising: a setting sleeve connected to said outer tubular; a mandrel being connected to said inner tubular; a chamber positioned between said outer tubular and said inner tubular; and wherein a pressure entering said chamber causes said setting sleeve to move downward and said mandrel to have applied an opposing force so that said outer tubular expands along said spiral slots.

23. The down hole device of claim 22 further comprising:

-stroke limit means, disposed between said setting sleeve and said mandrel, for terminating the movement of the mandrel in a first direction.

24. A method of expanding a down hole device within a well bore, the down hole device comprising: an outer tubular member having a series of slots therein, said slots being arranged about an exterior portion of said outer tubular member offset from the longitudinal axis of the outer tubular member, and an inner cylindrical member disposed within said outer tubular member; the method comprising:

-lowering the down hole device through an inner portion of a tubing, with the tubing being concentrically disposed within the well bore;

-lowering the down hole device to the desired level within the well bore;

-applying a first force to said inner cylindrical member in order to subject the inner cylindrical member to an upward force;

-moving said outer tubular member in a second direction in order to subject the outer tubular member to a downward force;

-expanding the outer tubular member along said slots, and wherein said expanded outer tubular member has an expanded outer diameter that is larger than the inner portion of the tubing;

-contacting the exterior of said outer tubular member against the wall of the well bore.

25. The method of claim 24 further comprising:

-lifting the down hole device within the well bore;

-cleaning the walls of the well bore with the exterior of said outer tubular member;

-pushing the down hole device down into the well bore;

-cleaning the walls of the well bore with the exterior of said outer tubular member.

26. The method of claim 24 wherein the down hole device further comprises a ratchet means, operatively associated with said outer tubular member and said inner cylindrical member, and the step of moving the outer tubular member further comprises:

-allowing movement of said outer tubular member in a first direction but preventing movement in a reverse direction by said ratchet means.

27. The method of claim 24 wherein the down hole device further comprises a setting apparatus comprising: an outer setting sleeve connected to said outer tubular member; a mandrel being connected to said inner cylindrical member; a chamber positioned between said outer setting sleeve and said mandrel; and wherein the step of moving said outer tubular member comprises:

-applying a pressure into said chamber;

-moving said outer setting sleeve downward in response to said pressure.

28. The method of claim 27 wherein said slots are arranged in a first spiral pattern.

29. The method of claim 27 wherein said slots are arranged in a first spiral pattern, and wherein said first spiral pattern extends to a second spiral pattern.

30. The method of claim 24 wherein the down hole device contains a plug device so that a flow stream from the well bore is prevented from flowing through the down hole device.

31. The method of claim 24 wherein the down hole device contains a one-way valve so that a flow stream from the well bore is allowed to flow in a first direction but is precluded from flowing in a second direction.

32. The method of claim 24 wherein an elastomeric member is disposed about the exterior of the outer tubular member and the step of expanding said exterior of said outer tubular member to engage the walls of the well bore further comprises sealingly engaging the elastomeric member

against the wall of the well bore.

33. The method of claim 24 wherein the outer tubular member has attached thereto a gravel pack screen and the method further comprises pumping a gravel pack slurry about the gravel pack screen.

34. A down hole device for use in a well bore, the down hole device comprising:

-an outer tubular member having a series of slots about the exterior of said outer tubular member, said slots being arranged at an angle offset from the longitudinal center of axis of the outer tubular member and wherein said outer tubular member has an outer diameter portion less than an inner diameter portion of the well bore;

-an inner cylindrical member disposed within said outer tubular member;

-means for moving said outer tubular member in a first direction in order to subject the outer tubular member to a first force thereby expanding the outer tubular member along said slots so that said expanded outer tubular member contacts the wall of the well bore;

-a cover disposed about said outer tubular member.

35. The down hole device of claim 34 wherein said slots are arranged about said outer tubular member in a spiral mode.

36 The down hole device of claim 35 wherein said slots are arranged about said outer tubular member in a first spiral pattern and wherein said first spiral pattern extends to a second

spiral pattern.

37. The down hole device of claim 36 wherein said moving means comprises:

-a setting tool having a setting sleeve connected to said outer tubular member and a mandrel being connected to said inner cylindrical member, and wherein said mandrel causes an upward force against the bottom end of said outer tubular member and wherein said setting sleeve causes a downward force against the top end of said outer tubular member so that said outer tubular member expands.

38. The down hole device of claim 37 further comprising:

-ratchet means, disposed between said setting sleeve and said mandrel, for allowing movement of said setting sleeve in a first direction but preventing movement of said setting sleeve in a reverse direction.

39. The down hole device of claim 36 wherein said moving means comprises:

-a setting apparatus comprising: a setting sleeve connected to said outer tubular member; a mandrel being connected to said inner tubular member; a chamber positioned between said outer tubular member and said inner tubular member; and wherein a pressure entering said chamber causes said setting sleeve to move downward so that said outer tubular member expands.

40. The down hole device of claim 39 further comprising an elastomeric member disposed about said cover.

41. A method of setting a plug within a casing, the plug comprising: a first anchoring device operatively associated with a second anchoring device, and wherein said second anchoring device comprising: an outer tubular member having a series of spiral slots arranged about the exterior of said outer tubular member, said outer tubular member being attached to said first anchoring device; an inner member disposed within said outer tubular member; and wherein the method comprises:

-lowering the plug to the desired level;

-setting the first anchoring device at the desired level;

-moving said outer tubular member in a first direction in order to subject the outer tubular member to a downward force;

-expanding said outer tubular member along said slots;

-engaging the outer diameter of said outer tubular member against the inner wall of the casing.

42. The method of claim 41 wherein said first anchoring device comprises a plurality of extendable arms and the step of setting the first anchoring device includes extending the plurality of arms to engage the wall of the casing and the method further comprises placing a slurry on the plug.

43. The method of claim 42 wherein said spiral slots are arranged in a first direction.

44. The method of claim 42 wherein said spiral slots are arranged in a first spiral

direction, and wherein said first spiral direction extends to a second spiral direction.

45. The method of claim 41 wherein said first anchoring device comprises slip means having projections thereon, and the step of setting the first anchoring device further comprises partially embedding said projections within the wall of the casing in order to engage the wall of the casing.

46. A method of gravel packing a subterranean zone penetrated by a casing, the method comprising:

-lowering an anchoring device to the desired level, the anchoring device comprising: an outer tubular member having a series of slots therein, said slots being arranged about the exterior of said outer tubular member in a spiral pattern; an inner member disposed within said outer tubular member, said anchoring device having a gravel pack screen attached at a distal end;

-moving said outer tubular member in a first direction in order to subject the outer tubular member to a downward force;

-expanding said outer tubular member along said slots;

-engaging the outer diameter of said outer tubular member against the inner wall of the casing;

-placing a gravel pack slurry into the annulus of the casing.

47. The method of claim 46 wherein said anchoring device has a cover material disposed

about the outer tubular member and wherein the step of engaging the outer diameter of said outer tubular member against the inner wall includes engaging said cover material against the inner wall.

48. The method of claim 47 wherein said cover material is made of a permeable material and the method further comprises:

-flowing a portion of a production stream from the subterranean zone through said permeable material;

-flowing the remaining portion of the production stream through an inner bore of said anchoring device.

49. The method of claim 47 wherein said cover material is made of an impermeable material and the method further comprises:

-sealingly engaging said impermeable material against the wall of the casing;

-flowing a production stream from the subterranean zone through an inner bore of said anchoring device.

50. The method of claim 47 wherein said spiral pattern is arranged in a first direction.

51. The method of claim 47 wherein said spiral pattern is arranged in a first spiral direction, and wherein said first spiral pattern extends to a second spiral direction.

52. An apparatus for use in a well comprising:

-a first anchor member;

-a second anchor member operatively associated with said first anchor member;

-setting tool means for setting said first anchor member and said second anchor member within the well.

53. The apparatus of claim 52 wherein said second anchor member has contained thereon a plurality of slots formed in a spiral pattern.

54. The apparatus of claim 53 wherein said first anchor member has a first inner member and a first outer member and wherein said second anchor member has a second outer member attached to said first inner member and a second inner member attached to said first inner member and wherein said setting tool means includes first means for moving said first and second outer members in a first direction and second means for moving said first and second inner members in an opposing direction.

55. A method of gravel packing a subterranean zone penetrated by a casing, the method comprising:

-placing a gravel pack screen within the casing, and wherein an annulus is formed within the casing;

-placing a gravel pack slurry about said gravel pack screen;

-lowering an anchoring device to the desired level, the anchoring device comprising: an outer tubular member having a series of slots therein, said slots being arranged

about the exterior of said outer tubular member in a spiral pattern; an inner member disposed within said outer tubular member, said anchoring device having a gravel pack screen attached at a distal end;

-latching a distal end of said anchoring device onto the top of said gravel pack screen;

-moving said outer tubular member in a first direction in order to subject the outer tubular member to a downward force;

-expanding said outer tubular member along said slots;

-engaging the outer diameter of said outer tubular member against the inner wall of the casing.

56. The method of claim 55 wherein said anchoring device has a cover material disposed about the outer tubular member and wherein the step of engaging the outer diameter of said outer tubular member against the inner wall includes engaging said cover material against the inner wall.